

REMARKS

By the above amendment, claims 16 - 37 have been canceled and new claim 38 - 55 have been presented wherein claims 38, 44 and 50 are independent claims.

Applicants note that each of the independent claims of this application is directed to the structural arrangement as illustrated in Figure 7 of the drawings, for example, including an upper magnetic pole 17 and a lower magnetic pole having a lower magnetic main layer 25 a lower magnetic pole front end portion 23 on the lower magnetic main layer and a projection step portion 27 on the lower magnetic pole front end portion. Additionally, as illustrated in Figure 9 of the drawings of this application, the thin film head has an air bearing surface facing the magnetic disk 14 and a non-magnetic insulating layer 25 is provided on the lower magnetic main layer 5, which non-magnetic insulating layer 25 is formed at an opposite side to an air bearing surface of the projection step portion. Furthermore, again referring to Figure 7, the projection step portion 27 includes one portion which faces the upper magnetic pole 17 and another portion which is delimited by the dashed line in Fig. 7, for example, which is wider than the one portion as represented by the distance S_{tw} as shown at the right-hand side of Fig. 7 at a predetermined depth S_{td} from the air bearing surface and which does not face the upper magnetic pole. The another portion has a width which is wider than a width of the one portion of the projection step portion at the air bearing surface. Applicants submit that these features which are common to each of the independent claims patentably distinguish over the cited art as will become clear from the following discussion. Additionally, claim 38, for example, recites the feature that the distance from the air bearing surface to a starting position line of the another portion of the projection step portion is shorter than a distance from the air bearing surface to the air bearing surface side edge of

the upper magnetic pole which faces the one portion of the projection step portion. That is, since the distance to the starting position line is represented by the distance Std and the side edge portion of the upper magnetic pole 17 which faces the step projection portion 27 extends beyond the distance Std, the distance Std necessarily is shorter than the other identified distance. Applicants note that the other independent claims recite other features and such features further patentably distinguish over the cited art, as will become clear from the following discussion. Applicants note that as described in the first full paragraph at page 38 of the specification of this application, the projection step portion 29 which is provided on the lower magnetic pole front end portion 23 serves for absorbing the leakage magnetic flux as described.

As noted above, although the Examiner has withdrawn claims from consideration as not being directed to the elected species, by the present amendment, claims 16 - 37 have been cancelled, and applicants submit that the newly submitted claims should be considered at this time since all claims are directed to the elected species Ib of Figs. 7 and 9.

The rejection of claims 16, 17, 21, 24, 25, 28, 29, 30, 31, 34 and 35 under 35 USC 102(e) as being anticipated by Sasaki (US 6,317,289) is considered to be obviated by the cancellation of such claims and presentation of new claims and such rejection is traversed insofar as it is applicable to the present claims and reconsideration and withdrawal of the rejection are respectfully requested.

Irrespective of the Examiner's attempt to apply Sasaki to the previously claimed invention, it is noted that the Examiner refers to Figures 24 and 25, but while utilizing language of the claims, fails to indicate what features by reference numeral or the like are considered to be present in Sasaki in terms of the claimed invention.

Accordingly, applicants have experienced difficulty in determining the applicability of Sasaki to the claimed invention.

As to the requirements to support a rejection under 35 USC 102, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

Turning to the features of the independent claims of this application, each of the independent claims 38, 48 and 50 recite the feature of a lower magnetic pole having the features of (a) a lower magnetic main layer; (b) a lower magnetic pole front end portion on the lower magnetic main layer; and (c) a projection step portion on the lower magnetic pole front end portion. Referring to Figures 24 and 25 of Sasaki et al, assuming arguendo, that member 27 thereof which is described as a first magnetic layer 27 may be considered to be a lower magnetic main layer, it is readily apparent that whatever the Examiner considers to be feature (b) of a lower magnetic pole front end portion on the lower magnetic main layer, and feature (c) of a projection step portion on the lower magnetic pole front end portion, are not

disclosed by Sasaki in the sense of 35 USC 102 nor rendered obvious therefrom in the sense of 35 USC 103. Accordingly, applicants submit that all claims patentably distinguish over Sasaki with regard to such features. Additionally, each of the independent claims recite the feature of a non-magnetic insulating layer on the lower magnetic main layer, which is formed at an opposite side to an air bearing surface of the projection step portion. Looking to Figure 24, it is readily apparent that such feature is not disclosed or taught by Sasaki. That is, in Sasaki, the projection step portions formed by trimming the magnetic layer 27 has a lower magnetic pole using ion etching. Thus, with this structure, the back of the projection portion which is the opposite side of the air bearing surface, the lower magnetic pole is provided in Sasaki. Accordingly, applicants submit that the above noted features of each of the independent claims patentably distinguish over Sasaki in the sense of 35 USC 102 and 35 USC 103 and all claims should be considered allowable thereover.

Additionally, each of the independent claims recite the feature that the projection step portion includes one portion which faces the upper magnetic pole and another portion which is wider than the one portion at a predetermined depth from the air bearing surface and which does not face the upper magnetic pole, with the another portion having a width which is wider than a width of the one portion of the projection step portion at the air bearing surface. Irrespective of the position set forth by the Examiner, it is not seen that Sasaki discloses this structural arrangement, which is recited in each of the independent claims of this application and therefore, each of the independent claims patentably distinguish thereover and should be considered allowable at this time.

With respect to independent claim 38, this claim recites the feature of a distance from the air bearing surface to a starting position line of the another portion

of the projection step portion is shorter than a distance from the air bearing surface to the air bearing surface side edge of the upper magnetic pole which faces the one portion of the projection step portion. Applicants submit that such features are not disclosed or taught by Sasaki such that this feature when taken in combination with the other features of the independent claims further patentably distinguish over Sasaki. Furthermore, independent claim 44 recites the feature that a distance from the air bearing surface to a starting position line of the another portion of the projection step portion is shorter than a distance from the air bearing surface to a position of an air bearing surface side edge of the upper magnetic pole where a distance from a track center line of the upper magnetic pole to the air bearing surface side edge position of the upper magnetic pole is equal to a distance from the track center line of the projection step portion to a position on the starting position line. Hereagain, such features are not disclosed by Sasaki. As to independent claim 50, this claim recites the feature of a distance from the air bearing surface to a starting position of the another portion of the projection step portion is shorter than a distance from the air bearing surface to a position of an air bearing surface side edge of the upper magnetic pole which faces the gap layer, which feature is also not disclosed by Sasaki. Thus, it is apparent that the features of the independent claims 38, 44 and 48 patentably distinguish over Sasaki and should be considered allowable thereover.

With respect to the dependent claims, applicants note that the claims which depend from each of the independent claims recite the similar features which features are not disclosed or taught by Sasaki and which, when considered in conjunction with the parent claims further patentably distinguish over Sasaki and should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims present in this application patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, applicants request favorable action in this application.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 520.40591X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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